

CLAIMS

We claim:

1. ~~1.~~—A lubricating oil composition for an internal combustion engine which comprises a mineral and/or synthetic base oil, (A) a succinimide-based ashless dispersant in an amount of 0.08 to 0.40 percent by mass in terms of nitrogen, (B) a metallic detergent in an amount of 0.06 to 0.22 percent by mass in terms of metal element, (C) a zinc secondary alkyldithiophosphate in an amount of 0.04 to 0.08 percent by mass in terms of phosphorus, and (D) a phosphorus-containing ashless anti-wear agent in an amount of 0.01 to 0.04 percent by mass in terms of phosphorus and contains sulfated ashes derived from the metal elements in the composition in an amount of 0.3 to 1.0 percent by mass.
2. ~~2.~~—The lubricating oil composition according to claim 1 which comprises a mineral and/or synthetic base oil, (A) a succinimide-based ashless dispersant in an amount of 0.08 to 0.40 percent by mass in terms of nitrogen, (B) a metallic detergent in an amount of 0.06 to 0.22 percent by mass in terms of metal element, (C) a zinc secondary alkyldithiophosphate in an amount of 0.02 to 0.08 percent by mass in terms of phosphorus, (D) a phosphorus-containing ashless anti-wear agent in an amount of 0.01 to 0.04 percent by mass in terms of phosphorus, and (E) a fatty acid amide in an amount of 0.01 to 2.0 percent by mass and contains sulfated ashes derived from the metal elements in the composition in an amount of 0.3 to 1.0 percent by mass.
3. ~~3.~~—The lubricating oil composition according claim 1~~—~~2~~~~ wherein Component (B) is an alkaline earth metal salicylate.
4. ~~4.~~—The lubricating oil composition according claim 1~~—~~2~~~~ wherein Component (D) is at least one compound selected from the group consisting of phosphoric acid esters and amine salts thereof; and phosphorus acid esters and amine salts thereof.
5. ~~5.~~—The lubricating oil composition according to claim 1 ~~2~~—which is used in diesel engines equipped with an exhaust-gas after-treatment device.

Abstract

6. The lubricating oil composition according claim 2 wherein Component (B) is an alkaline earth metal salicylate.

5 7. The lubricating oil composition according claim 2 wherein Component (D) is at least one compound selected from the group consisting of phosphoric acid esters and amine salts thereof; and phosphorus acid esters and amine salts thereof.

8. The lubricating oil composition according to claim 2 which is used in diesel engines equipped with an exhaust-gas after-treatment device.